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Montana Department of Agriculture
Environmental Management Division
Technical Services Bureau
Helena, Montana 59620

USE OF CHLOROPHACINONE TREATED BAIT FOR MANAGEMENT OF BLACK-TAILED PRAIRIE DOGS IN MONTANA

By

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ABSTRACT

A range finding field trial was conducted to determine the efficacy of a 100 ppm chlorophacinone oat bait for controlling black-tailed prairie dogs. A single application of the bait reduced prairie dog numbers 72% and two applications 48 hours apart resulted in a 96% reduction in activity.

Preliminary Report
December 1990

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INTRODUCTION

Currently, zinc phosphide is the only rodenticide registered for use on prairie dogs that is practical for large acreage applications. Applicators often complain of variable and less than satisfactory results when using it. Aluminum phosphide burrow fumigants are also registered but require moist soil conditions, are labor intensive, and are practical for only small area applications.

Sullivan and Sullins (1990) reported good results using 100 ppm (0.01%) chlorophacinone bait for reducing numbers of Richardson (*Spermophilus richardsonii*) and Columbian (*S. columbianus*) ground squirrels. Data is not currently available concerning the efficacy of this bait on other field rodent species in Montana. This report evaluates it as an alternative means for controlling black-tailed prairie dogs (*Cynomys ludovicianus*).

OBJECTIVE

The objective of the field study was to conduct a range finding study to determine if a 100 ppm (0.01%) chlorophacinone bait would have potential as a black-tailed prairie dog toxicant.

STUDY AREA

The study was conducted in Carbon County near Fromberg, Montana. The study site was a small prairie dog town on a private ranch located in a sagebrush/grassland pasture. The site was sparsely vegetated with forbs and cactus. The study was conducted during late September, 1990.

METHODS

A prairie dog town located within the study area was divided into three plots. One plot served as a no treatment control to monitor prairie dog activity. The second plot received one application of 100 ppm chlorophacinone on whole, hulled oats. The third plot received two applications of the chlorophacinone bait 48 hours apart.

The bait was applied using a calibrated dipper to scattering one tablespoon (9g) of bait near each burrow entrance.

Efficacy was determined by observing and counting active prairie dogs before and after treatment. Visual counts using binoculars were obtained on marked counting areas within treated and control plots. Three counts were made at five minute intervals each day on each plot for three consecutives days immediately prior to application and 7 and 14 days after application. The nine pretreatment and posttreatment visual counts were averaged to compute activity indices (AI) for each plot. Percent reduction in activity caused by the bait was computed by the formula:

$$\text{Percent reduction In Activity} = \frac{\text{Pretreatment AI - Posttreatment AI}}{\text{Pretreatment AI}} \times 100$$

Treated plots were observed for prairie dog carcasses and nontarget mortalities.

RESULTS

Prairie dog numbers were reduced 72% and 96%, respectively, on the single and double bait application plots.

No significant change in activity occurred on the control plot and no prairie dog carcasses or nontarget mortalities were observed.

DISCUSSION

The data in this trial were obtained using a small sample size and with no replications. Therefore, more field testing is needed before valid conclusions can be made concerning the efficacy of the test bait. Preliminary data does suggest that two applications of 100 ppm chlorophacinone oat bait may be effective for prairie dog control. Any future registration of chorophacinone for use on prairie dogs will depend on concerns for effects on nontarget species, particularly the black-footed ferret.

ACKNOWLEDGMENTS

Thanks to Oregon Rodent Control Outfitters who supplied the bait used in this study and Lee Richardson for allowing the use of his property.

LITERATURE CITED

Sullivan, D. and M. Sullins. 1990. Field evaluation of chlorophacinone treated bait for management of ground squirrels in Montana. Montana Department of Agriculture. Helena, Montana. Technical Report 90-03. 6pp.

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